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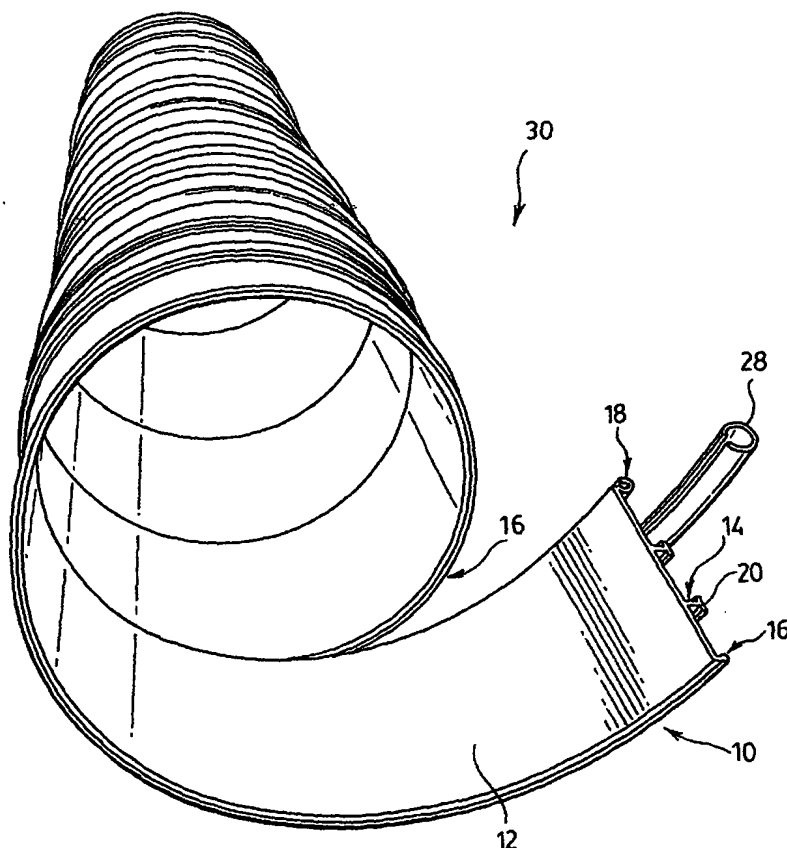
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(54) Title: INTERLOCKED STRIP STRUCTURE



(57) Abstract: An interlocked ribbed structure, such as a helically wound pipe, comprising a strip clamp. The interlocked ribbed structure is formed of a strip (10) and a strip clamp (28), the strip comprising a base (12) having first and second parallel edges extending along the strip and a series of ribs (14) upstanding from and also extending along the base, wherein the first edge has a first interlocking component (16) and the second edge has a second interlocking component (18), the first interlocking component (16) capable of interlocking with the second interlocking component (18) to form a joint (26), the strip clamp (28) being capable of compressing the joint (26) to ensure joint seal integrity and to reinforce the interlocked ribbed structure.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F16L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 301 200 A (LANGENFELD MICHEL ET AL) 17 November 1981 (1981-11-17) cited in the application	1,12-14, 20,22,31
Y	column 1, line 38 -column 2, line 9	2-11,32
A	figures	18,21, 29,30
X	----- PATENT ABSTRACTS OF JAPAN vol. 009, no. 018 (M-353), 25 January 1985 (1985-01-25) & JP 59 165714 A (TAKIRON KK), 19 September 1984 (1984-09-19)	12-17, 23-25
Y	abstract; figures 2,4	2,3,5-11
A	----- -/--	18-22, 26-32



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Patent family members are listed in annex.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DE 37 20 230 A (NORRES GEB SRIMAHARAJ SIRIWAN) 5 January 1989 (1989-01-05)	4
A	column 5, line 50-58 column 9, line 43 - line 52; figure 3 ---	1-3
Y	EP 0 225 202 A (TUYAUX BONNA) 10 June 1987 (1987-06-10)	32
A	column 2, line 52 - line 63 column 3, line 45 - line 55 column 3, line 64 - column 4, line 6; figures 1,3,4B,5A-D ---	1,9,14, 19,20,31
A	US 5 074 943 A (MENZEL STANLEY W O) 24 December 1991 (1991-12-24) column 3, line 47 - line 51 column 8, line 11 - line 15; figures 1,6 -----	1,9,14, 19,21, 28,31

INTERNATIONAL SEARCH REPORT

national patent family members

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PCT/CA/00054

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 4301200	A	17-11-1981	FR	2464819 A1	20-03-1981
			BR	8005735 A	17-03-1981
			DE	3062827 D1	26-05-1983
			EP	0025121 A1	18-03-1981
JP 59165714	A	19-09-1984	JP	63034253 B	08-07-1988
DE 3720230	A	05-01-1989	DE	3720230 A1	05-01-1989
EP 0225202	A	10-06-1987	FR	2588352 A1	10-04-1987
			EP	0225202 A1	10-06-1987
US 5074943	A	24-12-1991	AT	95901 T	15-10-1993
			AU	615218 B2	26-09-1991
			AU	2323888 A	09-03-1989
			WO	8901588 A1	23-02-1989
			CA	1302311 A1	02-06-1992
			DE	3884958 D1	18-11-1993
			DE	3884958 T2	10-02-1994
			DK	41390 A	19-04-1990
			EP	0379493 A1	01-08-1990
			FI	98350 B	28-02-1997
			JP	6075921 B	28-09-1994
			JP	2504543 T	20-12-1990
			NO	900739 A , B,	18-04-1990